AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Claim 1. (Currently Amended): A process for producing uretdione group-containing polyaddition products, which are solid below 40°C and liquid above 125°C, which comprises reacting in a static mixer at a temperature of at least 125°C

A) a uretdione group-containing ~~polyisocyanates~~ polyisocyanate with an average isocyanate functionality of at least 2.0, and

B) up to 70 wt.%, based on the total weight of components A) and B), of a diisocyanate other than A), with

C) a polyol having a number average molecular weight of 62 - 2000 and an average functionality of at least 2.0, and

D) up to 40 wt.%, based on the total weight of components C) and D), of a monofunctional isocyanate-reactive compound,

at an equivalent ratio of isocyanate groups to ~~isocyanates~~ isocyanate-reactive groups of 1.8:1 to 0.6:1.

Claim 2. (Original): The process according to Claim 1 wherein uretdione group-containing polyisocyanate A) is prepared from a diisocyanate which has aliphatically and/or cycloaliphatically bound isocyanate groups.

Claim 3. (Original): The process according to Claim 1 wherein uretdione group containing polyisocyanate A) is prepared from 1,6-diisocyanatohexane and/or 1-isocyanato-3,3,5-trimethyl-5-isocyanatomethylcyclohexane.

Claim 4. (Currently Amended): The process according to Claim 1 wherein polyol C) comprises C1) a polyhydric alcohol having a molecular weight of 62 to 400, and/or C2) a polyester or polycarbonate polyol other than C1).

Claim 5. (Currently Amended): The process according to Claim 1 wherein the polyol C) comprises C1) a diol having a molecular weight of 62 to 300, and/or C2) a polyester or polycarbonate diol having molecular weights of 134 to 1200 other than C1).

Claim 6. (Currently Amended): The process according to claim 1 wherein polyol C) is a mixture of

C2) 20 [[0]] to 100 wt.%, (based on the weight of polyol C), of a polyester diol having a molecular weight of 134 to 1200, and

C1) 0 to 80 wt.%, (based on the weight of polyol C), of a diol having a molecular weight of 62 to 300 other than C2.

Claim 7. (Currently Amended): A process for producing uretdione group-containing polyaddition products, which are solid below 40°C and liquid above 125°C, which comprises reacting in a static mixer at a temperature of at least 125°C

A) a uretdione group-containing ~~polyisocyanates~~ polyisocyanate with an average isocyanate functionality of at least 2.0, and

B) up to 70 wt.%, based on the total weight of components A) and B), of a diisocyanate other than A), with

C) a polyol having a number average molecular weight of 62 - 2000 and an average functionality of at least 2.0, and

D) up to 40 wt.%, based on the total weight of components C) and D), of a monofunctional isocyanate-reactive compound,

at an equivalent ratio of isocyanate groups to ~~isocyanates~~ polyisocyanate-reactive groups of 1.8:1 to 0.6:1 wherein the static mixer contains least one mixing zone and a subsequent reaction zone.

Claim 8. (Original): The process according to Claim 7 wherein uretdione group-containing polyisocyanate A) is prepared from a diisocyanate which has aliphatically and/or cycloaliphatically bound isocyanate groups.

Claim 9. (Original): The process according to Claim 7 wherein uretdione group-containing polyisocyanate A) is prepared from 1,6-diisocyanatohexane and/or 1-isocyanato-3,3,5-trimethyl-5-isocyanatomethylcyclohexane.

Claim 10. (Currently Amended): The process according to Claim 7 wherein polyol C) comprises C1) a polyhydric alcohol having a molecular weight of 62 to 400, and/or C2) a polyester or polycarbonate polyol other than C1).

Claim 11. (Currently Amended): The process according to Claim 7 wherein the polyol C) comprises C1 a diol having a molecular weight of 62 to 300, and/or C2) a polyester or polycarbonate diol having molecular weights of 134 to 1200 other than C1).

Claim 12. (Currently Amended): The process according to Claim 7 wherein the polyol C) is a mixture of

C2) 20 to 100 wt.%, (based on the weight of polyol C), of a polyester diol having a molecular weight of 134 to 1200, and

C1) 0 to 80 wt.%, (based on the weight of polyol C), of a diol having a molecular weight of 62 to 300 other than C2).